National Aeronautics and Space Administration

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July/August Calendar

28 **U.S. Coast Guard Chincoteague Island Open House**
9:30 a.m.-2:30 p.m. Meet Coast Guard, Coast Guard Auxiliary members and Virginia Marine Resources Commission Officers. Learn about Coast Guard missions, equipment and careers. Identification will be required at the gate.

30 **Astronomy & Night Sky Summer Series**
Begins at 7:30. Night Sky Observations through telescopes and Binoculars at the north end of Parking Lot No. 1 from 8:45-9:45 p.m. This series is free and open to the public, however park entrance fees still apply.

5 **Wallops Summer Interns Poster Session**
10 a.m.-1 p.m. in E-100 Auditorium. Come out and see what all of the interns learned during the summer.

11 **RockSat-X Launch**
Launch window scheduled 6-10 a.m. Backup days Aug. 12-14.

20 **Global Hawk Arrival**
The Global Hawks return to support NOAA's Sensing Hazards with Operational Unmanned Technology mission. It will stay until the end of September.

What's inside

on the **COVER**

Aircraft Office personnel pose in front of the C-130 in the N-159 hangar.

Photo Credit: NASA/Patrick Black

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The Director's Cut

Remembering our Navy Roots

We had an incredible 70th Anniversary celebration Saturday, June 27, with more than 7,000 guests spending the day with us, learning about our missions and the men and women who make Wallops so successful. I'm enormously grateful to all the volunteers who supported the event, as well as the exhibitors and sponsors who came out to show their support. It was truly a world-class, overall good time.

As proud as I am of NASA's work here during the past 70 years, I'm reminded the story of Wallops goes back even further. In 1943, the facility was known as Naval Auxiliary Air Station Chincoteague, from where the U.S. Navy trained pilots during World War II — former president George H.W. Bush perhaps being the most notable trainee. The important work the Navy conducted here helped protect our coastline from enemy U-boats during the war, overall helping to ensure our national security.

Founded by our nation's greatest generation, the Navy at Wallops is an enormous source of pride for me and I know for many of you as well. Today, the men and women of the Navy's Surface Combat Systems Center are integral to the Wallops community, keeping the Navy's heritage in our area alive and well. Adding to that heritage is the Navy's Field Carrier Landing Practice (FCLP) activity here, which in many regards is taking Wallops right back to its roots.

In Mid-July, the Navy wrapped up an FCLP detachment operation, which saw more than 100 personnel deployed to Wallops to conduct operations related to training pilots for duty on aircraft carriers. During the next several weeks and months, many of the Navy pilots who trained here will deploy in support of operations all around the world — operations directly related toward ensuring our national security.

An E-2 Hawkeye practices on the simulated carrier deck runway painted onto the Wallops Airfield. Photo credit: NASA/Terry Zaperach

I don't envy their job. I think about the families of those pilots and, being the father of a servicemember myself, I can imagine the uneasiness that comes with having a loved one exposed to the inherent risks and dangers that come with military service. Those feelings are balanced by an enormous sense of pride for those in the service of our country, working and fighting to secure the very freedoms and privileges we so often take for granted.

Some have asked why we have the FCLP program here, so allow me to offer a number of reasons. First, and something I know we can all agree with, it's mandated that government agencies work together to deliver services as efficiently and cost-effective as possible: FCLP at Wallops does that. We were critically in need of a partner to help maintain our airfield, which is one of the most essential pieces of infrastructure on our facility: FCLP at Wallops does that. We all have a role if not personally, most certainly in government, to contribute to the protection of our national security, and make no mistake: FCLP at Wallops does that.

NASA's history at Wallops is rich and tremendous and I was proud to celebrate that heritage alongside you June 27. But again, one fact that isn't lost on me is that our heritage runs deeper with the U.S. Navy and the protection of our nation. It's a heritage that lives on today with SCSC and FCLP. Lest we forget, it's a heritage we ought reflect upon and celebrate every day.

What's up @NASAWallops?

Educators learn about rocketry at Wallops

WALLOPS ISLAND — Twenty high school educators from seven states participated in hands-on rocketry activities during the Wallops Rocket Academy for Teachers (WRATs) program, part of Rocket Week at Wallops June 21-26.

While here, the educators learned about the basics of sounding rocket engineering, safety operations and science data collection. The weeklong activities culminated with launching a model rocket from the Wallops main base area and analyzing results of the flight. In addition, the educators had the opportunity to watch a sounding rocket launch June 25 from Wallops.

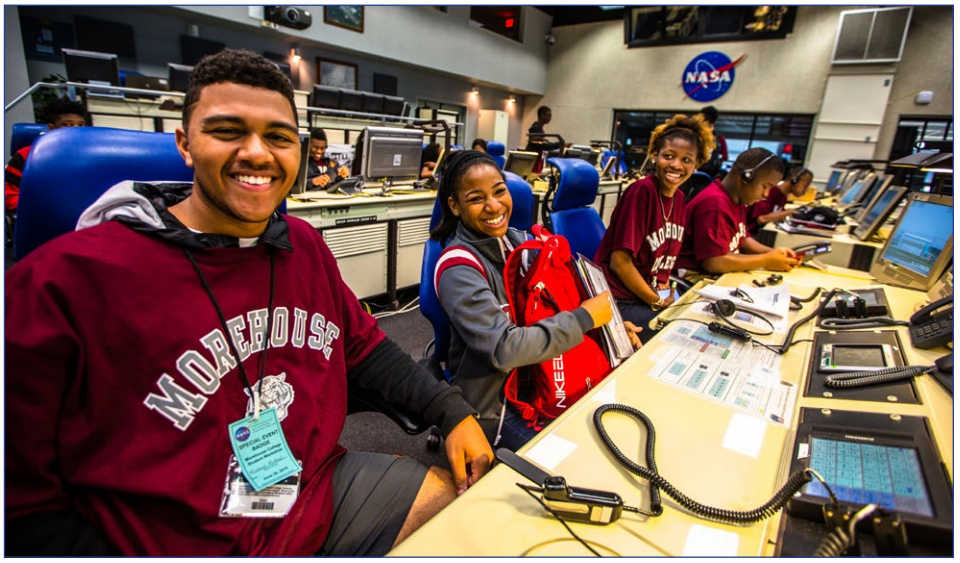
Educators built and launched model rockets from Wallops as part of the Wallops Rocket Academy for Teachers (WRATs) program Photo Credit: NASA/Patrick Black

Morehouse College students visit Wallops

WALLOPS ISLAND — Ninety students in the Morehouse College High School Student Math/Science Southeastern Regional summer program visited Wallops June 30 to participate in Science, Technology, Engineering and Mathematics (STEM) workshops.

The workshops, part of the education team STEM Engagement activities, exposed the high school students from five states to model rocketry, engineering, aviation and airborne sciences.

In addition, the students met with Joyce Winterton, senior advisor for education and member of the Goddard Women's Advisory Committee; Roland Wescott, Wallops Safety Office and member of the Wallops African-American Advisory Committee; and Sheryl Eni, Wallops' New and Developing Professionals Advisory Committee, about careers at Wallops and tips for applying for NASA internships.



Above and Below: Students in the Morehouse College High School student program tour the Range Control Center of Wallops June 30.
Photo Credit: NASA/Patrick Black

Justin Fernandez make a direct hit with the tennis ball during the Inspire The Next Generation event activities. Photo Credit: NASA/Patrick Black

Inspire the Next Generation

Above and below: Some of the young participants get a hands-on experience at the Sea Perch station. Photo Credit: NASA/Patrick Black

Above: The Wallops Protective Services Division brought out one of their K-9 dogs for a demonstration before the Ice Cream Social. Photo Credit: NASA/Jamie Adkins

Aircraft Office recognized as best in Federal Government

The Wallops P-3B staged and flew the 2014 Fall IceBridge campaign in Antarctica, marking the first time Wallops physically staged operations from the continent. Today, the P-3B is undergoing maintenance and receiving a new set of wings; the workhorse aircraft is scheduled to return to Wallops in the Spring of 2016 to resume science flight operations. Photo Credit: NASA/Michael Studinger

Wallops team earns top honor, named best out of 18 other agencies

WALLOPS ISLAND — NASA's Wallops Flight Facility Aircraft Office has been recognized as the best aviation small program in the Federal Government by the General Services Administration and the Interagency Committee for Aviation Policy.

The Wallops aircraft team provides NASA and commercial platforms for worldwide airborne scientific research, technology development, cargo airlift, launch range surveillance and recovery, and unmanned aircraft systems for science and any required chase missions.

"It is an honor for our aircraft office to be recognized for their efforts as the best small aircraft office program among the 18 Federal agencies with aviation programs," said Bill Wrobel, director of the Wallops Flight Facility. "From its beginnings in 1969 to the record breaking year in 2014 supporting airborne science operations, this office has truly shown the ability to provide safe, reliable and cost-effective operations."

The award is provided to agencies that have demonstrated how their flight programs support the success of the agency's mission. An independent panel of aviation experts judges agencies based on aircraft administration, operations, maintenance, training and safety.

Wallops Aircraft Office Chief Shane Dover, right, accepts the award for being recognized as the best small aviation small program in the Federal government during a June 25 ceremony. Photo Credit: Submitted

In 2014, Wallops participated in 30 NASA airborne science missions, flying more than 2000 flight hours. Both were records surpassing all previous marks during the office's 45 years.

In addition, Wallops completed the expansion of its airborne science fleet growing the number of aircraft from two to seven and doubled the mission flight hours and personnel. The program is currently supported by 50 personnel, including 20 part-time professionals from outside NASA.

College educators tackle operational tasks

WALLOPS ISLAND — Twenty faculty members from 16 Virginia Community Colleges participated in a workshop at Wallops Flight Facility June 3-5. The workshop provided team work case studies that were simulations of actual missions conducted by Wallops. The STEM Takes Flight workshop was funded by the Virginia Space Grant Consortium.

"This workshop takes a hands-on approach to exposing educators responsible for teaching and training the next generation about cutting-edge missions and operations," said Joyce Winterton, senior advisor for Education and Leadership Development at Wallops. "Educators have the opportunity to stay abreast of the technical, decision-making, and collaboration skills required for success in STEM careers."

During the three-day workshop, educators broke into teams to tackle case studies in four different Wallops missions areas: Sounding Rocket launch from Poker Flat Research Range, Alaska; Unmanned Aircraft: NASA's Hurricane and Severe Storm Sentinel Study; Scientific Balloons: NASA's Super Pressure Balloon; and Commercial Resupply Services: Antares International Space Station resupply mission.

On the final day of the workshop, the participants reported on what they had learned in their particular case study teams. Members of the balloon team remarked, "I thought I knew some things about balloons, but I had no clue about the size, altitude or lift capacity," and, "I'm so amazed at how well teamwork is done here. The motivation is amazing … everybody depends on one another."

A participant on the Sounding Rocket team states, "The simulation activity was incredible. I learned so much in a very short period of time. The teamwork that developed during the simulation gave me a perspective on how to encourage this in student groups."

Approximately, 2,500 community college students will be taught the content during the academic school year.

Educators work the Sounding Rocket case study during STEM Takes Flight June 3-5 at Wallops. Photo Credits: NASA/Joyce Winterton

Above: STEM Takes Flight participants provide a briefing on what they learned during their workshops.

Below: The Antares educational group visits the Range Control Center with Test Director Sarah Daughertry.

Celebrating 70 years at Wallops

Runners make their way down Wallops runway 10/28 during the 70th Anniversary 5K run/walk June 27. It was the first 5K event open to the public at Wallops. Photo Credit: NASA/Patrick Black

WALLOPS ISLAND — More than 7,000 visitors attended the Wallops 70th Anniversary Open House celebration June 27, featuring more than 60 exhibitors, special presentations, static display aircraft, and a 5K run/walk event.

Congressman Scott Rigell, representing Virginia's 2nd Congressional District, attended the opening ceremony event, highlighting Wallops' contributions to America's space program and its economic impact in Virginia.

Goddard Space Flight Center Director Chris Scolese read a certificate from U.S. Senator Barbara Mikulski recognizing Wallops as "a world-class international launch site celebrating 70 years of science and innovation." In addition, Virginia State Senator Lynwood Lewis and Virginia Delegate Rob Bloxom were in attendance, reading proclamations from the general assembly and from Virginia Governor Terry McAuliffe praising Wallops on 70 years of excellence.

Wallops Director Bill Wrobel touched on the importance of inspiring the next generation during the event. "STEM programs here like the Virginia Space Coast Scholars, the Virginia Space Flight Academy, the Eastern Shore Community College work experience, as well as the Summer Institute in Science, Engineering and Research are helping to inspire and grow the next generation," Wrobel said. "We could not have accomplished anything over the past 70 years or in the 70 to come if not for an energized, talented workforce."

Above: The Wallops Fire Department was on hand during the 70th Anniversary Open House

Below: Congressman Scott Rigell, Virginia State Senator Lynwood Lewis, and Virginia Delegate Rob Bloxom, listen to open remarks during the 70th Anniversary Opening Ceremony. Photo Credits: NASA/Terry Zaperach

Visitors check out a U.S. Navy E-2 Hawkeye on static display at the Wallops 70th Anniversary Open House June 27. Wallops provides ongoing support to the U.S. Navy's Field Carrier Landing Practice for Navy E-2 and C-2 Greyhound pilots. Photo Credit: NASA/Terry Zaperach

Above: Open house guests visit Wallops' Balloon Research and Development Lab, learning how scientific ballooning is advancing science and technology objectives. Photo Courtesy BPO

Above: Visitors participate in a robotics demonstration in the D-1 Hangar at Wallops. Photo credit: Terry Zaperach

Below: Visitors learn about Wallops Sounding Rockets Program from Phil Cathell. Photo Credit: Terry Zaperach

Below: U.S. Navy Senior Chief Petty Officer Gene Crozier staffed the Surface Combat Systems Center's information booth at the Wallops 70th Anniversary Open House event.

Sounding rockets kick off busy summer

WALLOPS ISLAND — Wallops' Sounding Rocket Program Office kicked off a busy summer launch schedule with two launches from Wallops Island, one carrying an education payload June 25 and the other a space technology mission July 7.

On June 25, more than 200 middle school and university students and instructors participating in Rocket Week at Wallops were on hand to witness the RockOn/ RockSat-C education launch.

The payload flew to an altitude of 71.4 miles via a NASA Terrier-Improved Orion suborbital sounding rocket and descended by parachute into the Atlantic Ocean off the coast of Wallops, where it was recovered.

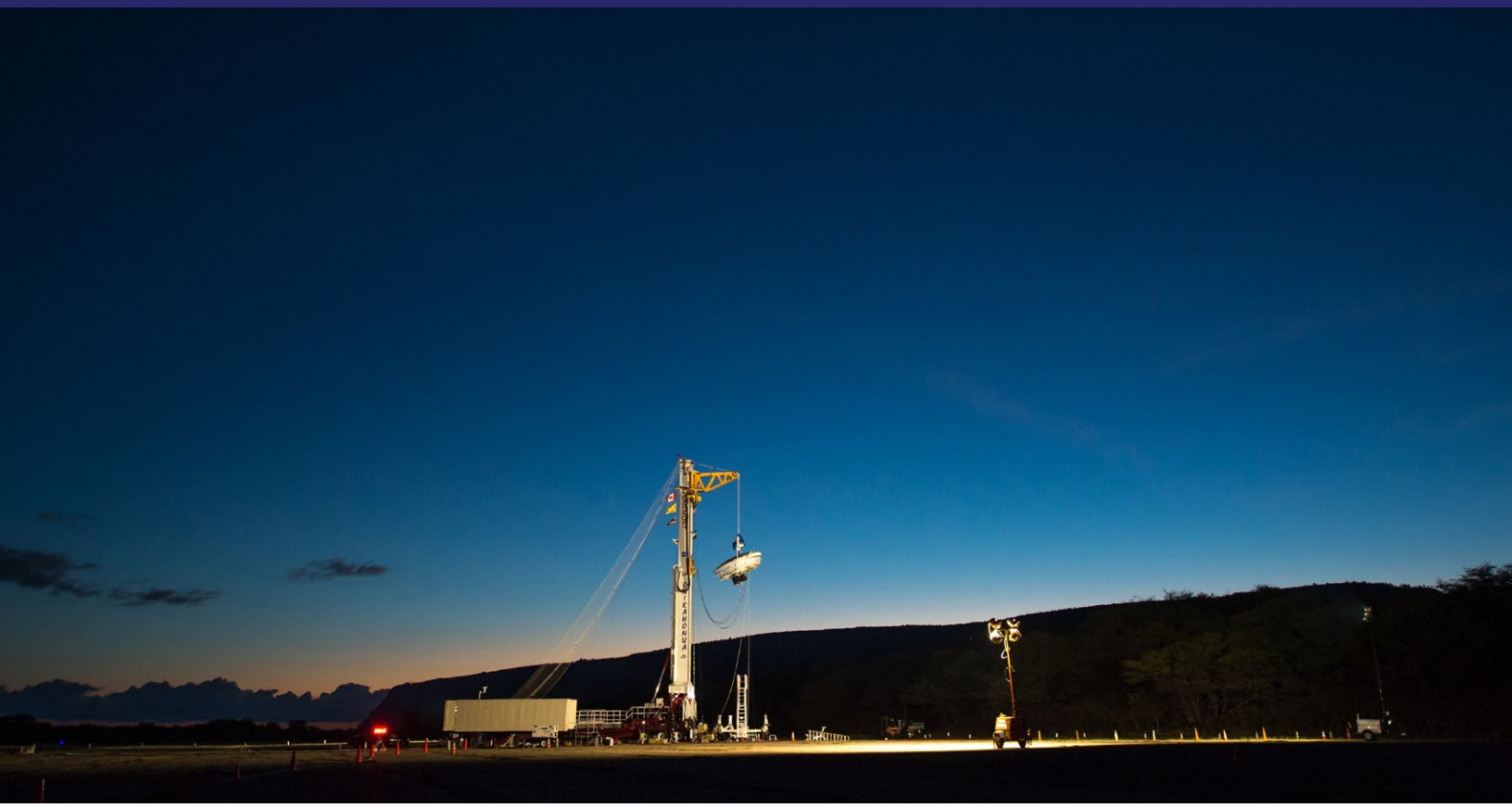
July 7, a NASA Black Brant IX rocket carried the SOAREX-8 Exo-Brake Flight Test from NASA's Ames Research Center, California, and the Radial Core Heat Spreader from NASA's Glenn Research Center, Ohio, into space.

The payload flew to an altitude of 206 miles and impacted in the Atlantic Ocean approximately 10 minutes after launch. Preliminary analysis shows that data was received on both projects.

The next launch from Wallops is scheduled Aug. 11: a Terrier-Improved Malemute suborbital sounding rocket launching the RockSat-X education payload for the Colorado Space Grant Consortium.

To date in 2015, the sounding rocket team has conducted 11 launch operations: five from Poker Flat Research Range, Alaska, three from Wallops Island, and three from White Sands Missile Range, New Mexico. The team has 15 more launches scheduled for the remainder of 2015: three from Wallops Island, nine from White Sands, and three from Andøya Space Center, Norway.

At left, a Terrier-Improved Malemute sounding rocket, and at right, a Terrier-Improved Orion, both launched from the Wallops Range this summer.
Photo Credit Left: NASA/Skip Bowman
Photo Credit Right: NASA/Allison Stancil



The Low-Density Supersonic Decelerator test vehicle hangs from its custom-designed launcher during the mission dress rehearsal in preparation for launch June 8 from U.S. Navy's Pacific Missile Range Facility in Hawaii.
Photo Credit: NASA/Bill Ingalls

Wallops key to LDSD test

KAUAI, HAWAII — When NASA's Low-Density Supersonic Decelerator (LDSD) test vehicle flew high over the Pacific Ocean June 8 to test two innovative aerobraking technologies, it did so thanks to the tenacity and ingenuity of workers at a host of NASA facilities, military installations and specialized companies that very nearly stretches from sea to shining sea.

This second full-scale flight test — the first took place in summer 2014 — was a crucial milestone for proving two key technologies for landing future robotic and human missions on Mars and safely returning large payloads to Earth.

The first is its supersonic inflatable aerodynamic decelerator, or SIAD, a balloon-like pressure vessel with a diameter of nearly 20 feet, designed to inflate around a vehicle and slow its entry. The second is a state-of-the-art supersonic parachute 100 feet in diameter, designed to further reduce the vehicle's speed during atmospheric descent.

NASA's Wallops Flight Facility played a crucial role in preparing the balloon to lift the LDSD test vehicle into the stratosphere. Wallops also assisted with the balloon launch, in tandem with the Orbital ATK-operated Columbia Scientific Balloon Facility in Palestine, Texas, and with avionics, communications, range safety and recovery operations.

"A scientific balloon turned out to be a relatively low-cost, efficient means of bringing our system much of the way to where it needed to be, as compared to a ground-launched rocket," said Mark Adler, program manager for the LDSD project at NASA's Jet Propulsion Laboratory in Pasadena, California. He credited Wallops' long experience with scientific balloons — and its close work with its contractors and especially with the Navy's Hawaii launch site — for bringing in the test flights on budget.

"It was crucial for us to bring in Wallops," said Adler. "From their technical expertise with balloons, range communication systems and recovery operations, to their direct knowledge of rocket range safety and logistics — since they themselves are a rocket range — I cannot imagine how we could have gotten where we are today without them."